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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/676,380	09/29/2000	Andre T. Baron	99-057	1919

7590 06/19/2006

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EXAMINER	
BORGEEST, CHRISTINA M	

ART UNIT	PAPER NUMBER
1649	

DATE MAILED: 06/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/676,380	BARON ET AL.	
	Examiner	Art Unit	
	Christina Borgeest	1649	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 May 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) *1-8* is/are withdrawn from consideration.

5)☒ Claim(s) *18-23* is/are allowed.

6)☒ Claim(s) *9-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Response to Amendment

The finality of the rejection of the last Office action is withdrawn because an issue regarding enablement for claim 9 (and dependent claims) regarding the use of terms, "human" and "carcinoma" has not been previously raised in the prosecution history.

The text of those sections of 35 U.S.C. not included in this action can be found in a prior office action mailed 7 May 2002.

Claim Rejections Withdrawn - 35 USC § 103

The rejection of claims 9-17 under 35 U.S.C. 103(a) is withdrawn in response to Applicant's amendment to claim 9, now including steps e) and f) of claim 18.

Claim Rejections - 35 USC § 112

Claims 9-17 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for an assay for determining the concentration of epidermal growth factor receptor in a biological sample from a ***female patient***, the assay comprising the steps recited in claim 18, whereby correlating a decrease in the concentration of soluble epidermal growth factor receptor in the patient biological sample with the presence of an ***ovarian carcinoma*** in the patient, does not reasonably provide enablement for an assay for determining the concentration of epidermal growth factor receptor in a biological sample from a ***human*** patient, the assay comprising the steps recited in claim 18, whereby correlating a decrease in the concentration of soluble epidermal growth factor receptor in the patient biological sample with the presence of a

carcinoma in the patient. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention commensurate in scope with these claims.

There are many factors to be considered when determining whether there is sufficient evidence to support a determination that a disclosure does not satisfy the enablement requirement and whether any necessary experimentation is "undue." (See In re Wands, 858 F.2d 731, 737, 8 USPQ2d 1400, 1404 Fed. Cir. 1988) These factors include, but are not limited to: (a) the breadth of the claims; (b) the nature of the invention; (c) the state of the prior art; (d) the level of one of ordinary skill; (e) the level of predictability in the art; (f) the amount of direction provided by the inventor; (g) the existence of working examples; and (h) the quantity of experimentation needed to make or use the invention based on the content of the disclosure.

The claims are broad; they encompass detecting any type of carcinoma in male as well as female patients. Sobol et al. (J Natl Cancer Inst. 1987; 79: 403-407) teach that MAb 528 reacted with large cell lung carcinomas, epidermoid and a subset of lung adenocarcinomas, as well as normal bronchial epithelium, but did not detect any small cell lung cancers (see abstract), thus the antibody recited in the claim does not stain in all carcinomas. Furthermore, in Applicants' response filed 9 September 2002 to the original rejection of claims 9-17 (now withdrawn) under 103(a) mailed 7 May 2002, Applicants' argue at p. 12, last paragraph:

> Partanen et al., Witters et al., and Harvey (753 teach the detection of soluble EGFR forms in serum, urine, blood and plasma of cancer patients and teach that increased sEGFR concentrations are associated with disease, and in particular, cancer. In contrast, Applicants' invention

> teaches that decreased sEGFR concentrations are associated with cancer. Because EGFR is overexpressed in many human cancers and proteolytic cleavage has been believed to release soluble EGFR molecules from the plasma membrane of such tumors, the teachings of the present invention that serum sEGFR concentrations are lower in cancer patients is not obvious.

Thus Applicants' arguments imply that the findings are not obvious over the prior art, in which most cancers are associated with ***increased*** levels of sEGFR and that the finding of decreased sEGFR concentrations (which claim 9 now incorporates into its method steps) is not expected.

In the absence of prior art teaching, the specification must provide evidence that the methods could be used as broadly claimed. The specification gives examples of mearsuring sEGFR in normal (healthy) males and females (Example VI) and ovarian cancer patients (Examples VII and VIII), but does not suggest that the claimed methods could be used for the detection of any type of carcinoma. Furthermore, by way of illustration, Ulbright (Mod Pathol. 2005;18 Suppl 2: S61-79) teach of the differences in gonadal tumors between the ovary and the testes (see whole document), thus the state of the art suggests that gonadal tumors differ in important ways. Though Ulbright does not suggest that diagnosis is generally a problem (see for example, S72 under ***Embyronal carcinoma***), nor does he suggest a one size fits all approach.

Due to the large quantity of experimentation necessary to determine what types of carcinomas the claimed assays could detect, the lack of direction/guidance presented in the specification and the absence of working examples directed to the same, the complex nature of the invention (cancer detection), the contradictory state of the prior art (see Sobol and Ulbright), and the breadth of the claims which fail to recite limitations

on the types of carcinomas that can be detected with the claimed methods, undue experimentation would be required of the skilled artisan to make and/or use the claimed invention in its full scope.

Allowable Subject Matter

Claims 18-23 contain allowable subject matter.

Conclusion

Claims 9-17 are rejected. Claims 18-23 are allowable.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christina Borgeest whose telephone number is 571-272-4482. The examiner can normally be reached on 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Janet Andres can be reached on 571-272-0867. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Christina Borgeest, Ph.D.

JANET L. ANDRES
SUPERVISORY PATENT EXAMINER